CLAIMS

1. An inkjet ink system comprising: a) a liquid vehicle; b) a colorant; and c) a gelling agent.

2. The inkjet ink system of claim 1, wherein the liquid vehicle is an aqueous vehicle or a non-aqueous vehicle.

3. The inkjet ink system of claim 1, wherein the colorant is a pigment.

4. The inkjet ink system of claim 1, wherein the colorant is a dye.

5. The inkjet ink system of claim 4, wherein the dye is insoluble in the liquid vehicle.

6. The inkjet ink system of claim 3, wherein the pigment is a blue pigment, a black pigment, a brown pigment, a cyan pigment, a green pigment, a white pigment, a violet pigment, a magenta pigment, a red pigment, an orange pigment, a yellow pigment, shades thereof, or mixtures thereof.

7. The inkjet ink system of claim 3, wherein the pigment is carbon black.

8. The inkjet ink system of claim 3, wherein the pigment is a modified pigment having attached at least one organic group.

9. The inkjet ink system of claim 8, wherein the organic group comprises at least one ionic group, ionizable group, or mixtures thereof.

10. The inkjet ink system of claim 8, wherein the organic group comprises a carboxylic acid group, a sulfonic acid group, a phosphonic acid group, or salts thereof.

11. The inkjet ink system of claim 1, wherein the gelling agent is a hydrophobically modified polyelectrolyte.

12. The inkjet ink system of claim 1, wherein the gelling agent is a polymer comprising at least one hydrophobic monomer unit and at least one ionic or ionizable monomer unit.

13. The inkjet ink system of claim 12, wherein the gelling agent further comprises at least one hydrophilic monomer unit.

14. The inkjet ink system of claim 12, wherein the gelling agent is a block copolymer or a graft copolymer.

15. The inkjet ink system of claim 12, wherein the hydrophobic monomer unit is an alkyl ester of acrylic acid or an alkyl ester of methacrylic acid.

16. The inkjet ink system of claim 12, wherein the ionic or ionizable monomer unit comprises a carboxylic acid group or salt thereof.

17. The inkjet ink system of claim 13, wherein the hydrophilic monomer unit comprises an alkylene oxide group.

18. The inkjet ink system of claim 1, wherein the gelling agent is a hydrophobically modified terpolymer comprising methacrylic acid monomer units, ethyl acrylate monomer units, and a hydrophobically-modified macromer units comprising α-methylstyrene monomer units and a poly(ethylene oxide) group.

19. The inkjet ink system of claim 1, wherein the gelling agent has a weight average molecular weight of between 1,000 and 3,000,000.

20. The inkjet ink system of claim 19, wherein the gelling agent has a weight average molecular weight of between 300,000 and 1,500,000.

21. The inkjet ink system of claim 1, wherein the gelling agent is incorporated into the liquid vehicle to form an inkjet ink composition.

22. The inkjet ink system of claim 21, wherein the gelling agent is present in an amount between 0.1% and 60.0% by weight based on the total weight of the inkjet ink composition.

23. The inkjet ink system of claim 22, wherein the gelling agent is present in an amount between 1.0% and 50.0% by weight based on the total weight of the inkjet ink composition.

24. The inkjet ink system of claim 23, wherein the gelling agent is present in an amount between 5.0% and 40.0% by weight based on the total weight of the inkjet ink composition.

25. The inkjet ink system of claim 1, wherein the gelling agent is incorporated into a second jettable composition.

26. The inkjet ink system of claim 1, wherein the gelling agent is incorporated onto a substrate.

27. The inkjet ink system of claim 1, wherein the gelling agent is attached to the colorant.

28. A method of generating a printed image comprising the steps of:

i) incorporating into a printing apparatus an inkjet ink composition comprising: a) a liquid vehicle, b) a colorant, and c) a gelling agent;

ii) jetting the inkjet ink composition; and

iii) generating an image onto a substrate, wherein the substrate optionally comprises a gelling agent.

29. The method of claim 28, further comprising the step of jetting a gelling composition, wherein the gelling composition has a pH effective to cause the gelling of the image.

30. The method of claim 29, wherein the step of jetting a gelling composition occurs before step ii).

31. The method of claim 29, wherein the step of jetting a gelling composition occurs after step ii).

32. The method of claim 28, further comprising the step of jetting a gelling composition, wherein the gelling composition comprises a liquid vehicle effective to cause the gelling of the image.

33. The method of claim 32, wherein the step of jetting a gelling composition occurs before step ii).

34. The method of claim 32, wherein the step of jetting a gelling composition occurs after step ii).

35. The method of claim 28, further comprising the step of increasing the temperature to a level effective to cause the gelling of the image.

36. The method of claim 28, further comprising the step of increasing the temperature to a level effective to evaporate a portion of the liquid vehicle to cause the gelling of the image.

37. The method of claim 28, further comprising the step of jetting a gelling agent composition, wherein the gelling agent composition comprises at least one gelling agent.

38. A method of generating a printed image comprising the steps of:

i) incorporating into a printing apparatus an inkjet ink composition comprising: a) a liquid vehicle and b) a colorant,

ii) incorporating into a printing apparatus a gelling agent composition comprising: a) a liquid vehicle and b) a gelling agent,

iii) jetting, in any order, the inkjet ink composition and the gelling agent composition, and

iv) generating an image onto a substrate.

39. The method of claim 38, further comprising the step of jetting a second gelling agent composition comprising: a) a liquid vehicle and b) a gelling agent, wherein the step of jetting a second gelling agent composition occurs before the jetting of the inkjet ink composition.

40. A method of generating a printed image comprising the steps of:

i) incorporating into a printing apparatus an inkjet ink composition comprising: a) a liquid vehicle and b) a colorant,

ii) jetting the inkjet ink composition, and

iii) generating an image onto a substrate, wherein the substrate comprises a gelling agent.

41. The method of claim 40, wherein the substrate comprises a coating of the gelling agent.